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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,379	12/03/2003	Noriyuki Kodama	NEKU 20.776 (100806-00242)	6385
26304	7590	01/12/2006	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			PHAM, LONG	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s) G.G.	
	10/728,379		KODAMA ET AL.	
	Examiner		Art Unit	
	Long Pham		2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 1-28, 34-39 and 41-52 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 59-64 is/are allowed.
- 6) ☒ Claim(s) 1, 29, 30, 31, 40 and 53 is/are rejected.
- 7) ☒ Claim(s) 32, 33 and 54-58 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/17/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 29-33, 40, and 53-64 in the reply filed on 11/10/05 is acknowledged.

Claim Objections

Claim 59 is objected to because of the following informalities: "said conductivity type" on line 3 of claim 59 should be "a second conductivity type". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 54 and 55 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original disclosure does not appear to teach one end of the trigger device is connected to one of a collector and an emitter of the first bipolar transistor and another end of the trigger device is connected to one of a collector and an emitter of the second bipolar transistor, one of the collector and emitter of the first bipolar transistor is connected to a pad, and one of the collector and emitter of the second bipolar transistor is connected to the ground.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29, 30, 31, 40, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ker et al. (US publication 2003/0075726) in combination with Polgreen et al. (US patent 5,465,189).

With respect to claim 29, Ker et al. teach an electro-static discharge protection device comprising (see all figures, specifically figures 5a, 5b, and 6a and associated text):

A first conductive type (n) well or layer 102 and A second conductive type (p) well 102 which are arranged adjacent to each other;

A first high concentration first conductive type (n) region 105 and a first high concentration second conductive type (p) region 117 which are formed in a surface of said second conductive type (p) well 101; and

A second high concentration first conductive type (n) region 120 and a second high concentration second conductive type (p) region 104 which are formed in a surface of said first conductive type (n) well 102, wherein said first high concentration first conductive type (n) region 105 is connected to a first power supply of a potential, said second high concentration first conductive type (n) region 120 and said second high concentration second conductive type (p) region 104 are connected to the second power supply of a potential, and said first

high concentration second conductive type (p) region 117 is connected with a trigger or trigger current supply circuit.

Ker et al. teach the anode region 120,104 and cathode 105 are connected to the same power supply of a potential but fail to teach the anode and cathode are connected to different power supplies of different potentials.

Polgreen et al. teach connecting anode and cathode to different power supplies. See fig. 6 and associated text.

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to incorporate the above teaching of Polgreen et al. into the device of Ker et al. to provide protection for all internal circuits. See col. 5, lines 25-40.

Ker et al. further fail to teach forming the electro-static discharge protection device on first conductive type layer or substrate.

However, the formation of a semiconductor device or an electro-static discharge protection device on first conductive type layer or substrate is well-known.

With respect to claim 30, Ker et al. further teach that the first high concentration second conductive type (p) region 117 and the second high concentration second conductive type (p) region 104 are arranged adjacent to each other. See figs. 5a,5b, and 6a.

With respect to claim 31, Ker et al. further teach that the first high concentration second conductive type (p) region 117 has a minimum width such that a contact (trigger) can be formed. See figs. 5a,5b, and 6a.

With respect to claim 40, Ker et al. further teach a region where silicide is not formed is provided between the high concentration regions adjacent to each other. See figs. 5a,5b, and 6a.

With respect to claim 53, since Ker et al. in combination with Polgreen et al. the claimed ESD protection circuit, a first bipolar transistor and a second bipolar transistor would inherently be formed to perform as a SCR type ESD.

Further with respect to claim 53, Ker et al. in combination with Polgreen et al. teach connecting a trigger device to the ESD or first and second bipolar transistors for triggering the ESD or first and second bipolar transistors.

Further with respect to claim 53, the process limitation "substantially simultaneously" has not been given patentable weight since claimed invention is directed to a device.

Allowable Subject Matter

Claims 54-58 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 43 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 59-64 are allowed.

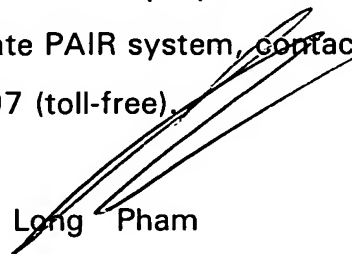
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 571-272-1714. The examiner can normally be reached on Mon-Frid, 10am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2814

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Long Pham
Primary Examiner
Art Unit 2814

LP